Maternal-Infant Bonding

MIRIAM R. SPINNER

SUMMARY

Maternal-infant bonding is a vital process which begins in early infancy and continues over the next few years. The bonding process has tremendous implications for both mother and child and is affected by many factors. Bonding problems occur and the family practitioner can identify these potential problems before pregnancy, during pregnancy, and in the postpartum period, and arrange assistance so the bonding process can unfold normally. (Can Fam Physician 24: 1151-1153, 1978).

Dr. Spinner is a psychiatric consultant to the McMaster Pediatric Unit at St. Joseph's Hospital and assistant professor in the Department of Psychiatry at McMaster University. Reprint requests to: Department of Psychiatry, St. Joseph's Hospital, 50 Charlton Avenue East, Hamilton, ON. L8N 1Y4.

"MATERNAL-INFANT bonding" means the development of the core relationship between mother and child. The bonding process occurs in both infant and mother (and/or father) and has tremendous implications for the child's future development. Throughout this article the maternal-infant bond will be discussed, since the mother is usually the primary caretaker. However, for 'mother', the terms father, aunt, grandparent, sibling or any primary caretaker such as babysitter may be substituted at any point in the article. Bonding problems are at the root of many dysfunctions of parenting such as child abuse, child neglect, and non-organic failure-to-thrive. The family physician with knowledge about the bonding process can identify potential bonding problems before pregnancy, during pregnancy, and the immediate postpartum period.

Definition

Maternal-infant bonding is the development of the reciprocal relationship between mother and child. Other terms used to describe this relationship are maternal-infant attachment, and maternal-infant dependency. John Bowlby, one of the leading theorists in this area, defines attachment behavior as "any form of behaviour which results in a person obtaining or retaining proximity to a differentiated or preferred individual . . . this behaviour is especially evident during early childhood and characterizes human beings from the cradle to the grave. It includes crying and calling which elicit care. The patterns of attachment behaviour shown by an individual turn partly on his or her present age, sex, circumstances and partly on the experiences he has had with attachment figures early in his life."[1]

These behaviors to a preferred figure develop during the first nine months of the infant's life and can be readily activated until age three. The more social experience the child has with a person, the more likely it is to become attached to that person. Bowlby suggests that the child is unable initially to form specific attachments to more than one person and that person is the mother. There has been disagreement with Bowlby's notion of exclusivity of attachment. Empirical investigations reveal that an infant is not confined exclusively to one bond, but may be capable of maintaining a number of attachments or bonds at the same time. Schaffer and Emerson found that 29% of a sample of infants formed several attachments simultaneously and 10% formed five or more attachments.[2] By the age of 18 months, they found that 87% of infants had formed multiple attachments and almost one third of them five or more. Grandparents, siblings, other relatives and neighbors were included in the multiple attachments, but fathers formed the largest group after mothers. The infants who were attached to several people did not necessarily have a shallow feeling for any of these people because they had multiple attachments. Hence, the availability of the attachment figures and the specific social setting determines the multiplicity of attachments of an infant.

Implications Of Bonding

The development of maternal-infant bonding has tremendous implications: it is widely accepted that the development of the first social tie between child and mother serves as a prototype for all future relationships.[3] In addition, attachment theory suggests that many forms of emotional distress and personality disturbance in adulthood (such as aggression, depression and emotional detachment) can all be explained by the disruption of the bonding or attachment process in early childhood.[1]

Klaus and Kennell, in their studies

of maternal-infant bonding just after birth in preterm and full-term babies, suggest that a mother's interaction with her baby and the baby's ultimate development may be greatly influenced by early and extended contact just after birth[4]. Klaus and Kennell think that prevailing hospital policies of separating preterm, sick and even full-term healthy infants from their mothers may affect the maternal-infant bonding process and change the maternal attitude toward her baby for months and years after the birth.

Klaus and Kennell have compared primiparous mothers who had extended contact with their babies after birth (16 or more hours of contact in the first three days) with a control group which had "normal hospital contact" (a glance at baby after birth, a short visit at 12 hours after birth and 20-30 minutes visits for feeding every four hours during the day). They found that the groups differed at one month and one year postpartum in their attentiveness and responsiveness to their babies. The mothers of the extended contact group were more preoccupied with their babies; they were more reluctant to leave their infants with others, they were more responsive to their crying, and engaged in more eye-to-eye contact during feeding. It is remarkable that the small amount of extended contact could produce such tremendous effects one year later. There were, however, some difficulties in the way the follow-up study was carried out—the interviewers and observers knew which group the mothers belonged to.[5]

Another study of premature infants at extreme risk because of prolonged and early separation has a different conclusion—Liefer studied premature babies who had been placed in an incubator for an extended period.[6] Mothers of such babies were randomly placed in three groups, one in which the standard hospital procedure was employed (incubator with no maternal-infant contact), a second in which the mother was permitted to view her baby in the incubator, and a third in which the mothers were permitted to handle the infants in the incubators. Observations of mothers at one week and one month after discharge from hospital revealed no consistent differences between the three groups. The period immediately after birth appears to have an impact upon the relationship between mother and child and may be seriously affected by a temporary separation; but this impression remains without conclusive support.

There are experiments of nature that show the flexibility in the mother-infant attachment process. Adopted children and their parents often form close bonds with each other; mothers seem to attach to their adopted children even if they have not had extended contact in the first few minutes or days of life. Although there is conflict about the specificity of the attachment period, it does appear that the early postpartum exposure can enhance the mother's attachment, especially if she is likely to have difficulty becoming close to her baby because of personal problems or because the baby has congenital abnormalities, is premature or is unwanted. The way the bonding occurs affects the child's personality and emotional development, which will in turn affect the bonding with his or her own children in the next generation. Because children are less receptive to attachments after three years, it is highly recommended that placement of infants in new environments should occur prior to six months of age and as close to birth as possible, and the latest placement should occur at three years of age.[7]

Developmental Sequence in Bonding

Maternal-infant bonding is the result of a developmental sequence which occurs in both the child and the mother.

For the child the development of a focused relationship with an adult is a long and continuous process with major milestones in infancy. In *the first step,* the infant develops a sense of individuation in response to his own hunger pains, his sensations of cold and warmth and his visual perceptions. In *the second step,* the infant develops social responsiveness so he can discriminate people from inanimate objects. In *the third step,* the child emits social responses—smiling, cooing—which then elicit social responses in adults. In this context, the child becomes familiar with specific people. Depending upon his exposure, he may be eliciting strong social responses from many people and hence have many attachments. In *the fourth step,* the child develops expectations of a familiar caretaking figure. With the continuity of eliciting responses from a familiar person the child learns to develop a sense of trust which is basic to close interpersonal relationships. This sense of trust with a person occurs by six to nine months and accounts for the reaction of withdrawal and hiding when unfamiliar figures are present.

Factors Affecting Developmental Sequence

The developmental sequence of bonding is greatly affected by the child's state and the mother's wellbeing. 'State' in infancy refers to stable and distinguishable patterns of behavior—regular sleep, periodic sleep, drowsiness, alert inactivity, waking activity and crying.[8] The child's state determines his ability to recognize and respond to human figures. Many mothers are aware that the same stimulus from them may elicit different responses in the baby if the baby's state is different. When a baby is content, the 'peek-a-boo' game will elicit smiles; however, when the baby is fussing, peek-a-boo may precipitate a crying crisis. The new mother has to learn what stimulus to use, given the baby's state and stage of development.

Anesthetics during childbirth greatly affect the baby's state and responsiveness in the newborn period and may lead to the initiation of a vicious cycle—nonresponsiveness in the baby elicits nonresponsiveness in the mother.

The mother's contribution to this attachment process to her infant is affected by many factors specific to her and will determine how she will handle and respond to her infant. Some individuals have difficulty in functioning as parents. Those with severe psychiatric problems, such as schizophrenia and depression, and those who are insensitive and egocentric may encounter problems in developing relationships with their children.

Individuals who are stressed and anxious because of problems with finances, poor housing, malnutrition or unemployment are also likely to be greatly hindered in their mothering.

Clinical experience has also shown us that deprived mothers are more liable to have deprived children because the basic skills of parenting, loving and caring are learned early in childhood as part of the early reciprocal mother-child relationship. Adults who have been deprived of love in childhood find it difficult to love and parent

their own children. Mothering does not appear to be a specific instinct in the sense of an inherently determined behavioral pattern; it appears to be a set of behaviors and feelings which manifests itself only under specific circumstances.

Some suggest that deficits in parenting are a result of ignorance about children and their needs. The evolution of the nuclear family has eliminated the constant exposure to children of varying ages in the course of growing up so that child-awareness and comfort with children is not learned in a setting where there can be supervision from adults with child-care skills. Hence, the first exposure to children and their needs may come about with childbirth.

However, there appear to be two aspects to the problem. Factual information about feeding, nursing, stimulation, etc., is extremely important and can be taught; loving and caring cannot be easily taught and does not depend on knowledge.

Identification of "Bond Risk"

Understanding the mother-infant attachment process and the variables in both the child and the mother which influence it, the family physician can attempt to identify the mother at risk of bonding problems. This risk can be identified at the different stages of contact.

In the family doctor's office before pregnancy: When a couple solicits birth control information, ample discussion should take place to ensure understanding that people have a choice about procreation. Contraceptive methods offer people the choice of parenthood. Many couples realize that it is no longer considered shameful to have no children—there are other choices available in life. People should choose to have children only if they really want them and will enjoy them. The unwanted child need not be conceived. It goes without saying that the physician must respect the religious principles and other values which may shape the attitudes of a couple to childbearing. If a couple proceeds with pregnancy despite ambivalence, the doctor should be alert to the possibility of bonding problems.

In the family physician's office during pregnancy: A careful history of the future mother's own childhood should be obtained from all women in their early months of pregnancy. Women who relate deprived and disrupted early childhood experiences as a result of fostering, abuse or emotional deprivation are high-risk mothers. Deprivation appears to be a transgenerational problem.

Very young teenagers may be at risk and bring problems to the mother-child relationship because of their immaturity.

Women who are pregnant and do not have the support of a husband or other person in an equivalent role or of their own family of origin are at risk for having to cope alone with a major responsibility and life change.

Immediately after delivery: Women who because of physical or psychological conditions are separated for long periods of time from their infants (several days to weeks) are at risk for bonding problems. While the data about a critical period of several minutes immediately after birth are not conclusive it is obvious that the longer the separation of mother from infant, the more difficult it will become for mother to attach to her infant; her anxiety and concerns about parenting may increase to the point of incapacitating her.

After delivery it may be possible to identify the child as a potential contributor to the bonding risk. Some babies are more difficult to manage than others.[9] Some babies are difficult from the initial encounter, making great demands on the mother; productive meshing of the mother and child becomes extremely difficult. In addition, certain medications offered during delivery render a baby sleepy and groggy and therefore adversely affect the infant's state and ability to relate. In addition, babies with congenital deformities or autism may bring different qualities and problems to the reciprocal mother-child relationship. If a baby has a major congenital abnormality, the family doctor should arrange sessions with the whole family in order to discuss despair, anger, disappointment, fears and hopes so that the attachment to the baby can proceed. Without discussion of these problems, the attachment process is at risk and may not develop along the appropriate lines.

It should be very clear that the problems and risks in bonding lie within the relationship and are not the fault of either parent. The mother, father and child's history, temperament, and present state all combine to affect bonding. Therefore, it is extremely important to identify the high-risk family before pregnancy, during pregnancy, or as soon after birth as possible.

With the identification of a specific problem, appropriate management plans can be made. For instance, if a woman has few social supports and is anxious about her forthcoming baby, supports must be arranged during pregnancy to assist her through that stressful period. In addition, every effort should be made in all cases to facilitate mother-child attachment immediately postpartum by providing for close and early contact with support. Rooming-in is a widely used method of facilitating this contact. It can and should be arranged but only with adequate nursing support. If the mother is stressed and feels inadequate about her own parenting skills and is at risk due to one of the factors identified above, she will feel isolated with the baby by rooming-in without active and helpful support; her anxieties will increase and her comfort and mothering skills will decrease.

The family physician can play an active role in facilitating the maternal-infant bonding, and in preventing bonding problems from developing. ◉

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